



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,335	11/26/2001	Junji Nagaoka	MTS-3288US	7419
7590	08/24/2006		EXAMINER	
RATNER AND PRESTIA Suite 301 One Westlakes, Berwyn P.O. Box 980 Valley Forge, PA 19482-0980			ORTIZ CRIADO, JORGE L	
			ART UNIT	PAPER NUMBER
			2627	
			DATE MAILED: 08/24/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/994,335	Applicant(s) NAGAOKA ET AL.
	Examiner Jorge L. Ortiz-Criado	Art Unit 2627
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>		
Period for Reply		
<p>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.</p> <p>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</p> <p>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</p> <p>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</p>		
Status		
<p>1)<input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>15 December 2005</u>.</p> <p>2a)<input type="checkbox"/> This action is FINAL. 2b)<input checked="" type="checkbox"/> This action is non-final.</p> <p>3)<input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11, 453 O.G. 213.</p>		
Disposition of Claims		
<p>4)<input checked="" type="checkbox"/> Claim(s) <u>1-13</u> is/are pending in the application.</p> <p>4a) Of the above claim(s) <u>6-8</u> is/are withdrawn from consideration.</p> <p>5)<input type="checkbox"/> Claim(s) _____ is/are allowed.</p> <p>6)<input checked="" type="checkbox"/> Claim(s) <u>1-5 and 9-13</u> is/are rejected.</p> <p>7)<input type="checkbox"/> Claim(s) _____ is/are objected to.</p> <p>8)<input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.</p>		
Application Papers		
<p>9)<input type="checkbox"/> The specification is objected to by the Examiner.</p> <p>10)<input type="checkbox"/> The drawing(s) filed on _____ is/are: a)<input type="checkbox"/> accepted or b)<input type="checkbox"/> objected to by the Examiner.</p> <p>Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).</p> <p>Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).</p> <p>11)<input type="checkbox"/> The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.</p>		
Priority under 35 U.S.C. § 119		
<p>12)<input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</p> <p>a)<input type="checkbox"/> All b)<input type="checkbox"/> Some * c)<input type="checkbox"/> None of:</p> <p>1.<input type="checkbox"/> Certified copies of the priority documents have been received.</p> <p>2.<input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____.</p> <p>3.<input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</p>		
<p>* See the attached detailed Office action for a list of the certified copies not received.</p>		
Attachment(s)		
<p>1)<input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3)<input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____</p> <p>4)<input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____</p> <p>5)<input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6)<input type="checkbox"/> Other: _____</p>		

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 13 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 13 recites “a program including instruction for causing a computer to serve as a tracking error signal generator, a detector and a calculator for an optical disk apparatus”.

The examiner cannot ascertain this limitation in the specification. There is no description regarding how a computer serves as a tracking error signal generator, a detector and/or a calculator caused by a program. The summary of the application recites that a 13th invention of the present invention is “a program for causing a computer to serve as all or part of said tracking error signal generating means, said detecting means, and said calculating means of said optical disk apparatus”. But there is no description made as to how to make such invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13, recites the limitation "said detected light" in line seven of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "said optical head" in line eight of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "said lens means" in line ten of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 13 is drawn to a "program" *per se* as recited in the preamble and as such is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied

in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

The claims should recite the phrase from the specification that is limited to a "computer-readable recording medium". The applicant might use the phrase "computer storage medium" in the specification and define such as limited to a tangible computer readable medium, e.g., hard disk drive, EPROM, CD-ROM. The applicant might explicitly use the phrase "tangible computer readable medium" in the specification. The claim could then be amended to recite "computer-readable recording medium" or "tangible computer readable medium".

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-5 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim U.S. Patent No. 5,828,637.

Regarding claim 1, Kim discloses an optical disk apparatus comprising:

an optical head having lens means of converging light from a light source onto an optical disk; and a photodetector for detecting the light thus converged and then reflected from said optical disk (See col. 12, line 63 to col. 13, line 46; Fig. 7);

tracking error signal generating means of generating a tracking error signal in order to perform tracking control on the basis of said detected light (See col. 12, line 63 to col. 13, line 46; Fig. 7, signals “TEp”);

detecting means of detecting a disk tilt “DT” indicating the amount of tilt of said optical head relative to said optical disk (See col. 12, line 63 to col. 13, line 46; Fig. 7, signal “Ts”); and

calculating means of calculating a lens shift LS indicating the amount of shift of said lens means relative to said optical head, according to a predetermined rule on the basis of said generated tracking error signal and said detected disk tilt DT (See col. 13, line 63 to col. 14, line 56; fig. 7, “.delta. R”).

Regarding claim 2, Kim discloses wherein said predetermined rule is expressed by the following

$$\text{Equation T} = a \cdot \text{LS} + b \cdot \text{DT}$$

which is satisfied among: the value T of said generated tracking error signal; said detected disk tilt DT; and said lens shift LS to be calculated; when predetermined constants a and b are given (See col. 14, line 56, equation (12)).

Regarding claim 3, Kim discloses wherein said detecting means can detect said disk tilt DT (See col. 7, lines 21-52; col. 12, line 63 to col. 13, line 46; Fig. 7, signal "Ts").

Regarding claim 4, Kim discloses an optical head driving means of driving said optical head within the cross section in a radius direction of said optical disk on the basis of the result of said detection of said disk tilt DT, wherein when said tracking error signal is detected, said optical head is driven so that said detected disk tilt DT substantially becomes zero (See col. 7, lines 21-52; col. 12, line 63 to col. 14, line 56; Fig. 7).

Regarding claim 5, Kim discloses wherein: said detecting means can detect the reproduction state of the information from said optical disk; said optical disk apparatus comprises optical head driving means of driving said optical head within the cross section in a radius direction of said optical disk on the basis of the result of said detection of said reproduction state of said information; and when said tracking error signal is detected, said

optical head is driven so that said reproduction state of said information becomes optimum (See col. 12, line 63 to col. 14, line 56; Fig. 7).

Regarding claim 9, Kim discloses wherein said tracking error signal is detected in “the mirror region” of said optical disk (See col. 12, line 63 to col. 13, line 56; Fig. 7; reflective part, where the light is reflected).

Regarding claim 10/claim 3), Kim discloses wherein said tracking error signal is detected by detecting the average level of said tracking error signal in the OFF-state of tracking control in the data region in the vicinity of the disk radius position of said optical disk where said disk tilt DT or said lens tilt LT is detected (See col. 12, line 63 to col. 13, line 56; Fig. 7 “phase difference of the tracking error signal”).

Regarding claim 11, Kim discloses conveying means of conveying said optical head in a radius direction of said optical disk on the basis of said calculated lens shift LS (See col. 7, lines 21-52; col. 12, line 63 to col. 14, line 56; Fig. 7).

Regarding claim 12, Method claim 12 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 12 corresponds to apparatus claim 1 and is rejected for the same reasons of anticipation as used above.

Regarding claim 13, the readable medium having a program is drawn to the program performing a method used to the corresponding apparatus claimed in claim 1. Therefore readable medium having a program of claims 13 correspond to apparatus claim 1 and are rejected for the same reasons of anticipation as used above.

Response to Arguments

Applicant's arguments filed 10/13/2005 have been fully considered but they are not persuasive.

Applicants argues that Kim does not teach or suggest "calculating means of calculating a lens shift LS indicating the amount of shift of said lens means relative to said optical head, according to a predetermined rule on the basis of said generated tracking error signal and said detected disk tilt DT.

The examiner cannot concur because, as claimed, Kim discloses calculating means of calculating a lens shift LS indicating the amount of shift of said lens means relative to said optical head, according to a predetermined rule on the basis of said generated tracking error signal and said detected disk tilt DT as outlined in col. 14, line 56; fig. 7, calculating ".delta. R"; equation (12).

Applicant is reminded that the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir.

1997). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L. Ortiz-Criado whose telephone number is (571) 272-7624. The examiner can normally be reached on Mon.-Thu.(12:30 pm- 9:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ANDREA WELLINGTON
SUPERVISORY PATENT EXAMINER